

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	10/08/2024 and 10/09/2024	
Media Program:	Drinking Water	
Regulatory Program(s)	Safe Drinking Water Act (SDWA)	
System Owner:	Barksdale Air Force Base (AFB)	
System Name:	Barksdale AFB Water System	
System Physical Location:	243 Curtis Avenue	
(city, state, zip code)	Barksdale AFB, LA 71110	
Mailing address:	334 Davis Ave West, Suite 208	
(city, state, zip code)	Barksdale AFB, LA 71110	
County/Parish:	Bossier Parish	
System Phone Number	318-456-6843	
System Contact:	Ronnie Kay	Environmental Program Manager
	ronald.kay.1@us.af.mil	
System Classification	Community Water System (CWS)	
PWS ID:	LA1015022	
Media Identifier Number:	N/A	
NAICS:	N/A	
SIC:	N/A	
Personnel participating in inspection:		
Stephen Clark	ERG (EPA Contractor)	Inspector
Michelle Seely	ERG (EPA Contractor)	Inspector
Tierra Robinson	EPA Headquarters	Inspector
Jessica Schlafstein	EPA Headquarters	Inspector
Michan Holbrook	Louisiana Department of Health	Regional Engineer
Ronnie Kay	Barksdale AFB	Environmental Program Manager
Cory Meador	Barksdale AFB	Operator
Matthew Stroupe	Barksdale AFB	Element Chief
Matt Konstanzer	Barksdale AFB	Military Lead for Water System Fuel Maintenance
Matt Carlson	Barksdale AFB	Operator
EPA Lead Inspector Signature/Date		
	Stephen Clark, ERG (EPA Contract Inspector)	
Supervisor Signature/Date		
	Ruben Alayon-Gonzalez, EPA Region 6, Enforcement and Compliance Assurance Division, Water Resources Section	

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

On October 8-9, 2024, U.S Environmental Protection Agency (EPA) Headquarters and EPA contract inspectors from ERG (hereinafter the EPA Inspection Team) conducted an announced Safe Drinking Water Act (SDWA) compliance inspection of the Barksdale Air Force Base (AFB) Public Water System (the System), PWS ID No. LA1015022. The inspection began at approximately 9:00 a.m. on October 8, 2024 and finished at approximately 5:15 p.m. on October 9, 2024. Barksdale AFB owns and operates the PWS.

Stephen Clark presented his SDWA inspector credentials to the System representatives during the opening conference. The EPA Inspection Team informed the System representatives that this was an EPA inspection to determine compliance with the SDWA and other applicable federal and state regulations. The EPA Inspection Team met with Ronnie Kay, the System's Environmental Program Manager, as well as other System representatives. A representative of the Louisiana Department of Health (LDH) also attended the inspection. Refer to [Appendix 2, Inspection Sign-In Sheet](#).

This report summarizes observations made as part of the inspection, which consisted of the following major activities:

- Discussions with System representatives regarding the operation and maintenance of the PWS.
- Site visit to the chloramination station at the entry point to the distribution system.
- Site visits to the system's five finished water storage tanks:
 - West Gate Elevated Storage Tower
 - Supply Elevated Storage Tower
 - MSA Elevated Storage Tower
 - East Housing Ground Storage Tank
 - East Housing Elevated Storage Tower
- Site visit to the System's booster pump station at the East Housing Ground Storage Tank.

Photos taken during the inspection are included in [Appendix 1, Photograph Log](#).

SYSTEM DESCRIPTION

The System is a consecutive system that provides service to 774 service connections and an estimated population of 13,000 individuals, according to the Safe Drinking Water Information System (SDWIS) database. The System is a community water system as defined by 40 C.F.R., Part 141, Subpart A.

The System purchases water from the City of Bossier City Water System (Bossier City; PWS ID LA1015004) and Shreveport Water System (City of Shreveport; PWS ID LA1017031). At the time of the inspection, the System was purchasing water from Bossier City. System representatives stated the System had changed from purchasing water from the City of Shreveport to Bossier City in 2022.

The System operates a treatment plant that provides chloramination via chlorine and ammonia injection, five finished water storage tanks, and one booster pump station. Chlorine and ammonia injection occurs just after the purchased water enters the Barksdale AFB via a transmission main, which is the entry point to the distribution system.

The System's five finished water storage tanks consist of four elevated tanks and one ground storage tanks, with a total capacity of 1,900,000 gallons:

- West Gate Elevated Storage Tower – 500,000-gallon capacity
- Supply Elevated Storage Tower – 500,000-gallon capacity
- Munitions Storage Areas (MSA) Elevated Storage Tower – 200,000-gallon capacity
- East Housing Ground Storage Tank – 200,000-gallon capacity
- East Housing Elevated Storage Tower – 500,000-gallon capacity

Each finished water storage tank has a separate inlet and outlet pipe. The System's booster pump station is co-located with the East Housing Ground Storage Tank.

Section II – INSPECTION ACTIVITY SUMMARY

The EPA Inspection Team conducted an array of interviews and field activities to discuss and observe PWS operation and maintenance (O&M) and to assess the condition of drinking water system assets. The physical inspection occurred over two days. The System representatives provided documents in response to a document request included in EPA Region 6's inspection notification email. The information in this report is based on document review, conversations with System representatives, and observations made during this inspection.

Staffing Information

Barksdale AFB's Civil Engineering and Water Fuel System Maintenance squadron are primarily responsible for the O&M of the PWS. Barksdale AFB's Bioenvironmental Engineering squadron conducts regulatory drinking water monitoring.

According to the LDH-issued operator certificates provided by the System, the System employs the following licensed operators:

- Water Distribution: one Grade 1, one Grade 2, and one Grade 3
- Water Production: one Grade 2 and one Grade 3
- Water Treatment: two Grade 1, one Grade 2, and one Grade 3

An operator conducts daily rounds according to the System's Daily Rounds Checklist, which consists of the following major activities:

- Conducting site visits to the chemical feed station and finished water storage tanks
- Recording operational parameters (e.g., flow rate, pressure)
- Collecting chlorine residual grab samples at various locations in the distribution system

The System does not operate a supervisory control and data acquisitions (SCADA) system for the PWS and has minimal telemetry installed. System representatives stated the only two alarms that notify operators of system operating conditions are a low-level alarm for the East Housing Ground Storage Tank and low pressure alarms at the West and North Entrance Gates.

Lead and Copper Sampling Results

The EPA Inspection Team reviewed the lead and copper sampling results for the System's most recent sampling conducted in August 2024. The 90th percentile for both lead and copper were below the

respective action levels; the 90th percentile for lead was 0 parts per billion and the 90th percentile for copper was 0.1 parts per million.

Cross-connection Control

The System uses NextGen software to track and schedule backflow device inspections and testing. If a device fails a test, operators create a work order to repair and retest the device. The inspections are documented on hard-copy sheets maintained for each device per Air Force policy. The sheets document information such as the device's location, identification number, and serial number, as well as the hazard level associated with the cross-connection.

Air Force policy requires a cross-connection survey to be completed every 5 years. The System representatives provided documents related to its most recent survey that was conducted in 2023. The scope of the survey included:

- Surveying each facility for existing and/or potential cross connections;
- Reviewing and verifying the proper installation of existing backflow prevention devices; and
- Recommending corrective actions where a risk of cross-connection exists or may exist.

Hydrant Inspection and Flushing

The System inspects and flushes approximately 20 percent of hydrants each year, following a map book broken into zones. Inspecting and flushing activities are scheduled via the NextGen software. Maintenance activities conducted in response to inspections are done under a work order and tracked via a work order tracking spreadsheet.

The System operates 10 automatic flushers according to the System description provided. System representatives stated that one of the automatic flushers designed to flush based on chlorine residual was not working at the time of the inspection.

The EPA Inspection Team also observed that the System maintains documentation for fire flow testing.

Valve Exercising

According to System representatives, the System does not routinely exercise distribution system valves to ensure valves of specific size/criticality are exercised according to a specific schedule. System representatives explained the System exercises valves opportunistically during other distribution system O&M activities. They stated the System's valve exercising program was a work in progress and that the System was developing a formal preventative maintenance schedule. They cited a lack of staffing as their reason for not performing more frequent valve exercising.

Customer Complaints

The System tracks customer complaints via its NextGen software and through its Utilities Work Order Tracker. Water Fuel System Maintenance responds to customer complaints related to public infrastructure. The Barksdale AFB's Housing Department responds to complaints related to private infrastructure (e.g., premise plumbing). System representatives explained that the Housing Department will notify the System if the customer complaint is related to public infrastructure so they can put in a work order.

Section 1433 Review

The EPA inspection team reviewed the System's Section 1433 Risk and Resilience Assessment and Emergency Response Plan. The team also reviewed the System's cybersecurity practices.

FACILITY/SYSTEM WALKTHROUGH

Note the EPA Inspection Team observed each finished water storage tank from the ground level and did not climb any of the tanks.

Chemical Feed at Entry Point

The Facility walkthrough began at the chloramination station, which is near the Barksdale AFB's North Gate entrance.

The EPA Inspection Team observed two flow meters installed on the transmission main that delivers purchased water to the System. System representatives stated these flow meters are used for billing purposes and are owned by the City of Shreveport. System representatives stated that a valve outside the Barksdale AFB is used to control the flow of water to the System from either the City of Shreveport or from Bossier City; the System does not operate the valve.

Chlorine and ammonia gas cylinders are stored in separate rooms. The EPA Inspection Team observed that the chlorine gas room was equipped with an exhaust fan, an outward facing door with a crash bar, and a safety shower. The gas cylinders were labeled as either full or empty, and a bottle containing ammonia was present to detect gas leaks when changing gas cylinders. The in-use cylinders were stored on scales to monitor usage. Each room was equipped with gas sensors to detect chemical leaks.

At the time of the inspection, the System was injecting only chlorine gas because Bossier City was performing a free chlorine conversion (i.e., changing the disinfectant from chloramines to chlorine). System representatives provided a memo it had issued to its customers that the free chlorine conversion was to occur from August 6, 2024 to November 4, 2024.

The System measures total chlorine of the purchased water via a continuous analyzer. Automatic control valves regulate the feed rate of chlorine and ammonia gas, which is determined by the flow rate entering the distribution system. The ultrasonic flow meter and chemical injection lines are located inside a subsurface vault at the station.

The EPA Inspection Team reviewed the System's logbook, which documents the following:

- Chemical usage and feed rates
- Total chlorine residual measured by the continuous analyzer
- Grab sample results for free and total chlorine residual
- Pressure inside the transmission main
- Flow rate of water entering the distribution system
- Chemical feed pump status (on/off)

West Gate Elevated Storage Tower (identified in SDWIS as "TANK 1358 - GOLF COURSE")

The tank site is surrounded by a locked perimeter fence equipped with barbed wire. The EPA Inspection Team observed the general condition of the support structures, the altitude valve vault, and the overflow pipe. The altitude valve vault was equipped with a sump pump and was free of standing water. System representatives stated the smooth-nozzle sample tap inside the vault is not typically used. The end of the tank's overflow pipe was screened with both a #24-mesh screen and larger screen.

The tank was equipped with a cathodic protection system. System representatives stated a contractor had recently performed a system-wide cathodic protection survey to evaluate the operating condition of the cathodic protection systems installed at each finished water storage tank.

After observing the tank, the EPA Inspection Team observed the onsite booster station, which is only used during fire emergencies. The booster station was equipped with two pumps. During normal operations, finished water bypasses the two pumps. A pressure gauge and smooth-nozzle sample tap were located on the pipe inside the pump station. The System maintains a logbook onsite that documents daily system pressure readings taken from this pressure gauge and chlorine residual sample results from samples obtained from the sample tap. At the time of the inspection, the pressure gauge documented a pressure of 57 pounds per square inch (psi).

A backflow protection device was installed inside the pump station for the station's fire sprinkler system. The device's tag documented annual tests/inspections.

Supply Elevated Storage Tower (identified as in SDWIS as TANK 4490 - SUPPLY TOWER)

The tank site is surrounded by a locked perimeter fence equipped with barbed wire. The EPA Inspection Team observed the general condition of the support structures, the altitude valve vault, and the overflow pipe. The tank was constructed in 1993 according to the tank nameplate.

The altitude valve vault was equipped with a sump pump and was free of standing water. The end of the overflow pipe had a screen with a mesh size larger than #24. The EPA Inspection Team observed debris inside the screen.

Like the West Gate Elevated Storage Tower, a booster station used during fire emergencies is located at the tank site. The booster station was equipped with two pumps. During normal operations, finished water bypasses the two pumps. A pressure gauge and smooth-nozzle sample tap were located on the pipe inside the pump station. The System maintains a logbook onsite that documents daily system pressure readings taken from this pressure gauge and chlorine residual sample results from samples obtained from the sample tap. At the time of the inspection, the pressure gauge documented a pressure of 60 psi.

A backflow protection device was installed inside the pump station for the station's fire sprinkler system. The device's tag documented annual tests/inspections.

The onsite chloramination system was not in service at the time of the inspection. System representatives stated the station was not needed and had never been used.

MSA Elevated Storage Tower (identified in SDWIS as TANK 7298 - TRAILER MAINT)

The tank site is located inside the AFB base but was not surrounded by a fence. The tank was constructed in 2015 according to the tank nameplate. The tank was equipped with a cathodic protection system.

A pressure gauge and smooth-nozzle sample tap were located on the outlet pipe inside the base of the tank. The System maintains a logbook onsite that documents daily inlet and outlet pressure readings and chlorine residual grab sample results. At the time of the inspection, the outlet pressure gauge documented a pressure of 52 psi.

The overflow pipe had a screen with a mesh size larger than #24. The EPA Inspection Team observed debris inside the screen; the debris appeared to be piping material or coating from the tank interior.

System representatives stated the nearby hydrant would be used to drain the tank.

East Housing Ground Storage Tank (identified in SDWIS as TANK 8077 - CAPEHART, LIBERTY AND HERITA)

The tank site is surrounded by a locked perimeter fence equipped with barbed wire. The tank was constructed in 1997 according to the tank nameplate. A placard above the name plate documented an internal and external inspection as well as a cathodic protection survey performed in August 2024; the placard stated: "Service: Internal & External Inspection and CP Survey Date: August, 2024."

The overflow pipe had a flap valve and a #24-mesh screen. The EPA Inspection Team observed vegetation at base of tank, with sealant/caulking missing in areas. The splash pad for the overflow was constructed of cinderblocks; the EPA Inspection Team observed that the nearby ground was not graded to direct drainage away from tank to prevent erosion around the tank foundation.

The System's one booster pump station is located at the tank site. The station's three pumps are used to convey water to from the East Housing Ground Storage Tank to the East Housing Elevated Storage Tower and operate based on the level inside the tower. At the time of the inspection, Pump No. 3 was out of service; the System replaced valve actuators for the pumps and had yet to install the electrical wiring for this pump's actuator. A stationary backup generator for the station was located onsite. The discharge pressure gauge read approximately 55 psi at the time of the inspection.

East Housing Elevated Storage Tower (identified in Identified in SDWIS as TANK 8095 - EAST HOUSING NEAR FIRE STA)

The tank site is surrounded by a locked perimeter fence equipped with barbed wire. The EPA Inspection Team observed the general condition of the support structures, the overflow pipe, and the drain pipe. The tank was constructed in 2008 according to the tank nameplate.

The overflow pipe drained to cinderblocks placed over a splash pad and had a screen with a mesh size larger than #24. The EPA Inspection Team observed what appeared to be metallic debris inside the screen. Additionally, spider webbing was present on the screen.

The tank's drain pipe, which had a screen and an air gap, drained to a concrete pad away from the tank site. The drain was not plumbed to the storm or sanitary sewer system.

The tank's pressure gauge read approximately 58 psi at the time of the inspection.

Water System Fuel Maintenance

After the system walkthrough, the EPA Inspection Team visited the Water System Fuel Maintenance office and shop to observe spare parts and supplies maintained onsite and to discuss water system O&M activities and management systems with System representatives.

Section III – AREAS OF CONCERN

SDWA Section 1433(b) requires a CWS serving a population greater than 3,300 to prepare or revise, where necessary, an emergency response plan (“ERP”) that incorporates the findings of the RRA no later than six months after completion of its RRA. The ERP shall include:

- a. strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
- b. plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the CWS to deliver safe drinking water;
- c. actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers; and
- d. strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

- Area of Concern 1.** During the inspection, EPA inspectors reviewed Respondent’s ERP and observed that the ERP did not include all required elements of Section 1433(b).
- a. Neither the Contingency Response Plan (CRP) nor the Installation Emergency Management Plan (IEMP) included strategies to improve the resilience of the system.
 - b. The CRP included a list of equipment available to respond to an emergency and construction materials on hand. The document referred to mutual support agreements with local agencies, but at the time of the inspection, the appendices were not available for the EPA Inspection Team to review.
 - c. Neither the CRP nor the IEMP included actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard.
 - d. Neither the CRP nor the IEMP included strategies to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system

Part XII, Section 343.A of the Louisiana State Sanitary Code states, “There shall be no physical connection between a public water supply and any other water supply which is not of equal sanitary quality and under an equal degree of official supervision; and there shall be no connection or arrangement by which unsafe water, hazardous fluid or contamination may enter a public water supply system.”

- Area of Concern 2.** The EPA Inspection Team observed that some backflow prevention devices were not inspected or tested annually, according to hard-copy forms used to

document these inspections (i.e., Air Force Form 843; refer to [Appendix 1, Photograph 1](#) for an example). System representatives stated that if a backflow prevention device was not inspected annually, this was likely due to renovations or building demolitions. Note, the EPA Inspection Team did not discuss specific examples with System representatives during the inspection.

American Water Works Association (AWWA) G100-11 Water Treatment Plant Operation and Management, 4.2.7.7 states, “The plant shall have an instrument calibration program that includes the frequency of calibration. Equipment and instrumentation used to monitor the treatment process must be calibrated using traceable or certified standards or according to regulatory agency approved or manufacturer-approved standards.”

Area of Concern 3. At the entry point chloramination station, the service sticker on the flow meter controller documented a service date of March 4, 2019. The due date for the next service date is documented as March 4, 2020 (refer to [Appendix 1, Photograph 2](#)). At the time of the inspection, it was unclear to the EPA Inspection Team if the System was routinely verifying the accuracy of the entry point flow meter. Chlorine and ammonia gas are fed based on flow rates measured by this flow meter.

AWWA M27 External Corrosion Control for Infrastructure Stability, Third Edition, Chapter 1 states, “The health of water consumers may be threatened whenever extensive corrosion breaches the sanitary integrity of the water system. The ever-present danger of backflow of contaminated liquid into the drinking water system is further increased when water pressure is interrupted to facilitate repairs on corroded wells, pumps, treatment equipment, pipes, valves, and services. Another concern is that public safety depends heavily on an adequate supply of pressurized water for fire control. Low pressures and insufficient water can result in the growth of small fires into disasters that cause injury, death, and destruction of property. Uncontrolled corrosion can be a major contributor to the problems of unreliable or inadequate fire-control systems. Controlling corrosion in water utility systems can contribute greatly to cost savings, public health protection, and public safety.”

Area of Concern 4. The EPA Inspection Team observed cracked and peeling pipe coating inside the booster station at the West Gate Elevated Storage Tower (refer to [Appendix 1, Photograph 3](#)).

Recommended Standards for Water Works (Ten States Standards) (2022 Edition), Section 7.1.7 C states, “The overflow shall open downward and be screened with twenty-four mesh non-corrodible screen. The screen shall be installed within the overflow pipe at a location least susceptible to damage by vandalism. A mesh-fitted mechanical flap valve is acceptable provided the flapper is supplied with non-corroding and non-seizing hinges. The flap valve shall be spring loaded or counterweighted, so it closes and forms a tight seal after the overflow event.”

Area of Concern 5. The EPA Inspection Team observed that the overflow pipes at the Supply Elevated Storage Tower (refer to [Appendix 1, Photograph 4](#)), the MSA Elevate Storage Tower (refer to [Appendix 1, Photograph 5](#)), and East Side Elevated Storage Tower (refer to [Appendix 1, Photograph 6](#)) had screens with a mesh size larger than #24. Also note the EPA Inspection Team observed debris inside the overflow screens.

Part XII, Section 225.I of the Louisiana State Sanitary Code states, “All water storage structures shall be provided with an overflow which is brought down to an elevation between 12 and 24 inches above the ground surface, and discharges over a drainage inlet structure or a splash plate.”

AWWA M42-13, Steel Water-Storage Tanks, Page 32 states “Overflow waters should be directed beyond the tank exterior perimeter to avoid damage to the tank grade or foundation during overflow.”

Area of Concern 6. The EPA Inspection Team observed that the overflow pipe at the East Housing Ground Storage Tank drained to cinderblocks placed on top of a concrete splash pad (refer to [Appendix 1, Photographs 7 and 8](#)). At the time of the inspection, it was unclear to the EPA Inspection Team if this structure would adequately direct water beyond the tank exterior permit to avoid damage to the tank grade or foundation. The EPA Inspection Team also observed cinderblocks placed on top of the splash pad at the East Side Elevated Storage Tower (refer [Appendix 1, Photograph 9](#))

EPA How to Conduct a Sanitary Survey of Drinking Water Systems (2019) Section 10.4.8 states, “Concrete foundations should be inspected to ensure that there is minimal spalling (ground level tanks) and no cracks (elevated tanks). Anchor bolts should not be rusted so much that their material strength has been compromised. Column shoes should be clean and painted, and grout under the shoes and riser plates should be in good condition. There should not be any pooled water, erosion, weeds, or shrubs around a tank’s foundation.”

Area of Concern 7. The EPA Inspection Team observed that the foundation seal for the East Side Ground Storage Tank was missing in areas. Additionally, roots were observed at the interface of the tank bottom plate and tank foundation (refer to [Appendix 1, Photographs 10 and 11](#)).

Recommended Standards for Water Works, (Ten States Standards) (2022 Edition) Section 7.1.17 states, “Proper protection shall be given to metal surfaces by paints or other protective coatings...”

AWWA M42-13 Steel Water-Storage Tanks, Chapter 8 Routine Operation and Maintenance states, “Any exterior corrosion, especially where metal loss is apparent, should be evaluated by a professional engineer familiar with the construction of water-storage tanks. If the operator notices a change or severe worsening of the exterior corrosion patterns, he or she should bring this to the attention of the engineer. Special areas to observe are anchor bolts and nuts, rods, and rod pins and clevises.”

Area of Concern 8. The EPA Inspection Team observed an area of missing exterior coating at the East Housing Ground Storage Tank (refer to [Appendix 1, Photograph 11](#)).

AWWA M42-13 Steel Water-Storage Tanks, Chapter 8 Routine Operation and Maintenance states, “Although it is important that the periodic professional inspections...be performed on tanks, some critical portions of the tanks should be inspected by the water system operators....at least once a month, or weekly if possible...”

Area of Concern 9. System representatives stated the roof of finished water storage tanks are not inspected more frequently than contractor-performed inspections, which are

conducted once every five years (i.e., the System was not inspecting manholes and vents more frequently than once every five years).

40 CFR 141.63(e)(3) states, "The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant level for total coliforms...and for achieving compliance with the maximum contaminant level for E. coli...:(1) Protection of wells from fecal contamination by appropriate placement and construction; (2) Maintenance of a disinfectant residual throughout the distribution system; (3) Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, cross connection control, and continual maintenance of positive water pressure in all parts of the distribution system;"

Area of Concern 10. According to System representatives, the System does not routinely exercise distribution system valves to ensure valves of specific size are exercised according to a specific schedule. System representatives explained the System exercises valves opportunistically during other distribution system O&M activities. They stated the System's valve exercising program was a work in progress and that the System was developing a formal preventative maintenance schedule. They cited a lack of staffing as a reason that inhibited the System from performing more frequent valve exercising.

AWWA Standard G100-11 Water Treatment Plant Operation and Management, Quality assurance practices, states "The plant shall have written operational practices and procedures for the operation and maintenance of the plant."

Area of Concern 11. System representatives stated the System lacked written procedures for the operation of the entry point chemical feed systems. For example, chemical feed rates are adjusted based on the institutional knowledge of system operators.

Closing Conference

On October 9, 2024, the EPA Inspection Team conducted a closing conference with System representatives at approximately 4:00 p.m. Refer to Appendix 3, Closing Conference Sign-In Sheet. The EPA Inspection Team reviewed observations with the System representatives and explained that the observations were preliminary and did not constitute any formal compliance determinations.

Section IV – FOLLOW UP

No additional information was received by EPA after the onsite inspection on October 9, 2024.

Section V – LIST OF APPENDICES

Appendix 1 – Photograph Log
Appendix 2 – Opening Conference Sign-in Sheet
Appendix 3 – Closing Conference Sign-in Sheet

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Barksdale Air Force Base Public Water System

Barksdale AFB

Parish: Bossier

State: Louisiana

DATE	TESTED BY (SIGNATURE)	REDUCED PRESSURE DEVICES	DOUBLE CHECK DEVICES	RELIEF VALVE	PRESSURE VACUUM BREAKER	REPAIR	RETEST
03 MAR 06	R. Ozuna		6.2	6.2	2.3		
17 OCT 06	R. Ozuna		6.2	6.2	2.3		
07 Oct 15	Hannis		6.2	5.8	2.0		
11 MAR 16	Hannis		6.2	5.8	2.0		
5-18-17	Hannis		8.0	8.0	2.5		
10-10-18	Hannis		8.0	8.0	2.6		
01/18/19	Oryon		8.0	8.0	2.6		
9-1-20	Hannis		8.0	8.0	2.4		
7-22-21	Ruzah		8.0	8.0	2.2		
1-30-24	Carter		8.0	8.0	3.0		

Photograph 1. Water System Fuel Maintenance 10/08/2024 15:13 PA080258.JPG

Description: View of an Air Force Form 843 for a specific backflow prevention device. The form shows the latest testing was performed on January 30, 2024. Prior to that, the device had not been tested since July 22, 2021.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 2. Treatment Plant at Entry Point 10/08/2024 10:19 PA080185.JPG

Description: View of the controller for the flow meter. The service tag documented a service date of March 4, 2019. The due date for the next service date is documented as March 4, 2020.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 3. West Gate Elevated Storage Tower 10/08/2024 10:56 PA080201.JPG

Description: View of cracked and peeling pipe coating inside the booster station.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 4. Supply Elevated Storage Tower 10/08/2024 11:22 PA080215.JPG

Description: View of the overflow pipe with a screen with a mesh size larger than #24. Also note debris inside the screen.

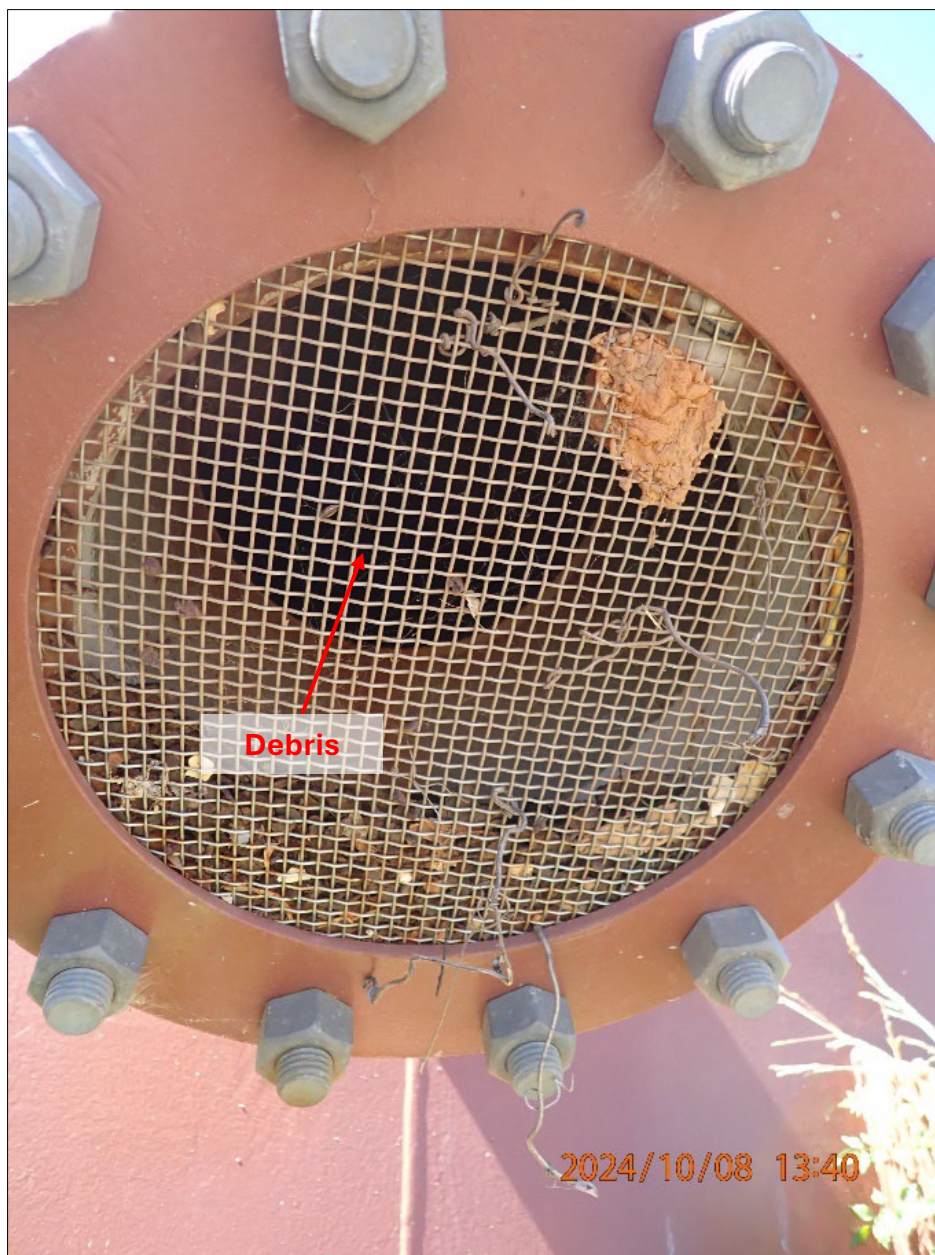


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 5. MSA Elevated Storage Tower 10/08/2024 13:40 PA080235.JPG

Description: View of the overflow pipe with a screen with a mesh size larger than #24. Also note the debris inside the screen, which appeared to be metallic.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 6. East Side Elevated Storage Tower 10/08/2024 14:19 PA080251.JPG

Description: View of the overflow pipe with a screen with a mesh size larger than #24. Also note the debris inside the screen, which appeared to be metallic.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 7. East Housing Ground Storage Tank 10/08/2024 14:08 PA080244.JPG

Description: View of the overflow pipe draining to cinderblocks placed over a concrete splash pad. It was unclear to the EPA Inspection Team if this structure would adequately direct water away from the tank foundation.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 8. East Housing Ground Storage Tank 10/08/2024 14:10 PA080245.JPG

Description: Additional view of the tank overflow, cinderblocks, and concrete splashpad.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 9. East Side Elevated Storage Tower 10/08/2024 14:19 PA080250.JPG

Description: View of the overflow pipe draining to cinderblocks placed over a concrete splash pad.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 10. East Housing Ground Storage Tank 10/08/2024 14:06 PA080239.JPG

Description: View of the interface of the tank bottom plate and concrete foundation. Note lack of foundation seal and roots from vegetation that had been removed.

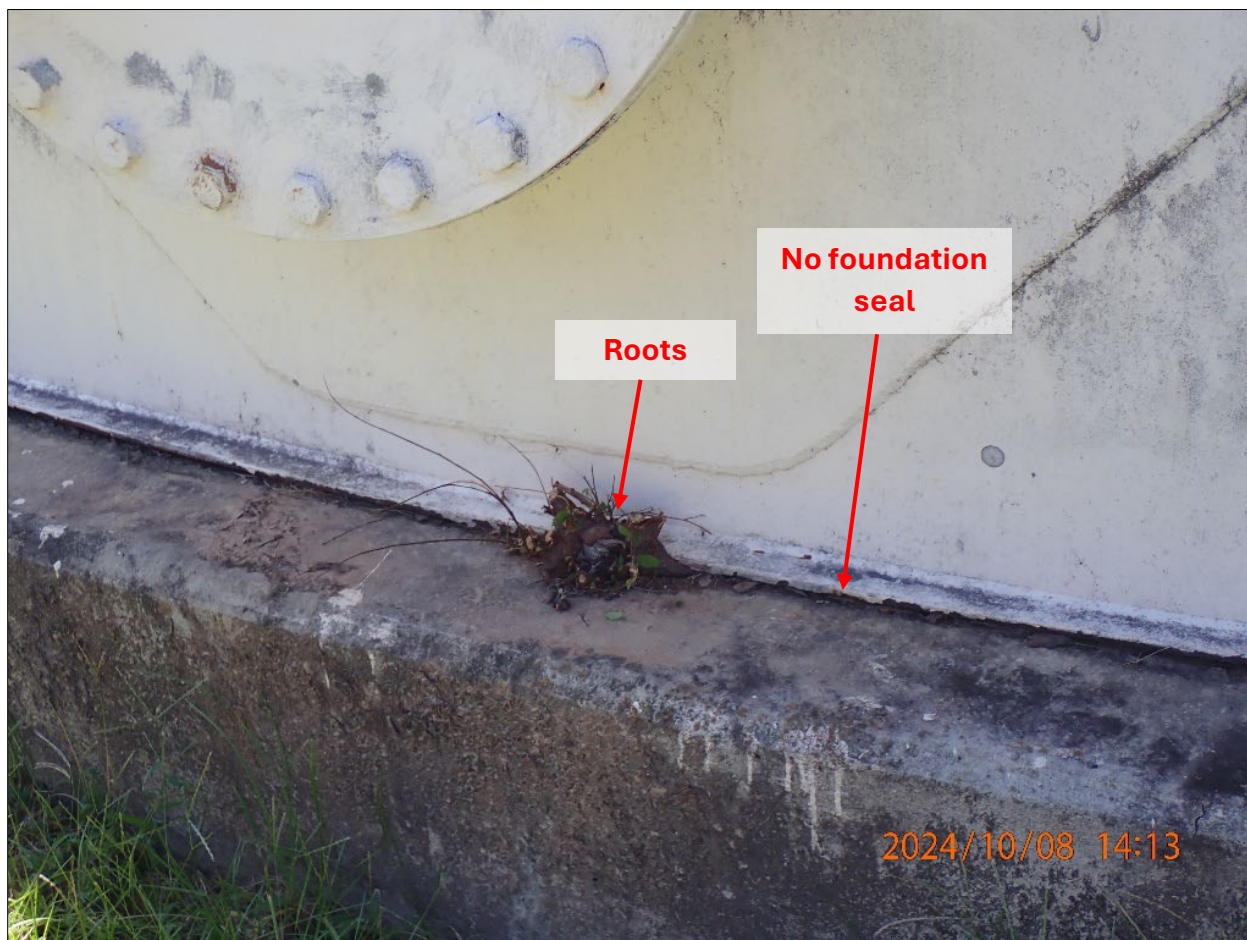


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 11. East Housing Ground Storage Tank 10/08/2024 14:13 PA080247.JPG

Description: View of the interface of the tank bottom plate and concrete foundation. Note lack of foundation seal and roots from vegetation that had been removed.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: Barksdale Air Force Base Public Water System		
Barksdale AFB	Parish: Bossier	State: Louisiana



Photograph 12. East Housing Ground Storage Tank 10/08/2024 14:07 PA080241.JPG

Description: View of an area of missing tank exterior coating.

Appendix 2

Opening Conference Sign-in Sheet



Barksdale Air Force Base SIGN-IN SHEET

NAME AND TITLE (Print)	SIGNATURE	EMAIL	PHONE	COMPANY
Matthew Stroupe Element Chief	Matthew Stroupe	matthew.stroupe@us.af.mil	318-230-2851	USAF
Michael Holbrook Regional Engineer	Michael Holbrook	Michael.Holbrook@LA.gov	318-422-1147	LDH/DPH ENGINEERING
Michelle Seely, ERG	Michelle Seely	michelle.seely@erg.com	240-938-9242	ERG
Ronnie Kay	Ronnie Kay	ronald.kay.1@us.af.mil	318-456-2770	USAF
Stephen Clark	Stephen Clark	stephen.clark@erg.com	720-789-8046	ERG (EPA Contractor)
Malinda Mathews	Malinda Mathews	malinda.mathews@us.af.mil	318-426-0753	Dept. of Defense - USAF
Tierra Robinson	Tierra Robinson	robinson.tierra@epa.gov	202-564-2067	USEPA
Jessica Schlafstein	Jessica Schlafstein	schlafstein.jessica@epa.gov	912-667-6492	USEPA
SHARRON A. CRAYTON WATER SHOP	Sharon A. Crayton	crayton.sharon@epa.gov	(214) 883-5415	USEPA, RC
JOEY MEADOR WORK LEAD	Joey Meador	joey.meador@us.af.mil	318-456-8919	USAF
MATT KONSTANZER	Matt Konstanzer	matthew.konstanzer@us.af.mil	318-456-8919	USAF
Matt Carlson	Matt Carlson	matthew.carlson.29@us.af.mil	318-456-4286	USAF
Bill Lee	Bill Lee	William.Lee.27@us.af.mil	318-456-8273	"

Appendix 3

Closing Conference Sign-in Sheet



Barksdale Air Force Base SIGN-IN SHEET

NAME AND TITLE (Print)	SIGNATURE	EMAIL	PHONE	COMPANY
Kent Jenkins	Deputy - Mission Support Group	Kent.jenkins@us.af.mil		
Matthew Stroege Environmental Element Chief	McE	456-2225 matthew.stroege@us.af.mil	318456-2397	
CODY MEADOR WATER SHOP WORK LEAD	CME	CODY.MEADOR.1@US.AF-MIL	456-8919	USAF
TSgt Mathew Konstanzer Water Shop NCOIC	Mathew	mathew.konstanzer@us.af.mil	456-8919	USAF
Michael Holbrook Regional Engineer	Michael Holbrook	Michael.Holbrook@LA.GOV	318-422-1147	DDH/LDH Engineering Services
Tierra Robinson, Scientist / Inspector	TR	robinson.tierra@epa.gov	202 564 2067	USEPA
Jessica Schlafstein Scientist / Inspector	Jessica	Schlafstein.Jessica@epa.gov	912-667-6492	USEPA
Matthew Carlson Tanker/Saver PM	MC	matthew.carlson.29@us.af.mil	3184564286	USAF
Malinda Mathews Installation Mgt FH Chief	Malinda Mathews	malinda.mathews@us.af.mil	3184563757	Dod-USAF